

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF :  
HIDEKI HIRATA, ET AL. : EXAMINER: VERDERAME  
SERIAL NO: 10/506,605 :  
FILED: September 10, 2003 : GROUP ART UNIT: 1756

OPTICAL INFORMATION MEDIUM

DECLARATION UNDER 37 C.F.R. § 1.132

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313

SIR:

Now comes Mr. Juichi Fujimoto who deposes and states:

1. That I am one of the inventors of Serial No. 10/506,605
2. That I am a graduate of KYUSHU UNIVERSITY and received a Master degree in the year 1990.
3. That I have been employed by Mitsubishi Rayon Co., Ltd. for 17 years as a researcher in the field of radiation curable resins.
4. That the following experiments were carried out by me in order to show that the urethane acrylates in Preparation Examples 1 and 2 of Yukiya et al (JP 11279240) cannot show good tensile elastic modulus nor good protective ability.

<Experiments I and II>

Urethane acrylate compounds Y-1 and Y-2 were prepared in the same manner as in Production Examples 1 and 2 [0031] to [0032] of Yukiya et al (JP 11279240). Curable compositions and optical information media were produced in the same manner as in Example 1 of the present specification excepting urethane acrylate compound Y-1 or Y-2 was used in place of urethane diacrylate

UA1 (15 parts), and they were evaluated. The results are shown in Table A.

<Experiments III and IV>

Curable compositions and optical information media were produced in the same manner as in Example 1 of the present specification excepting urethane acrylate compound Y-1 or Y-2 was used in place of urethane diacrylates UA1 and UA3 (65 parts), and they were evaluated. The results are shown in Table A.

Table A

		I	II	III	IV
Curable composition	Y-1 in P.Ex.1 of JP'240 (parts)	15		65	
	Y-2 in P.Ex.2 of JP'240 (parts)		15		65
	UA3 (parts)	50	50		
	TAIC (parts)	10	10	10	10
	THFA (parts)	25	25	25	25
	HCPK (parts)	3	3	3	3
	Viscosity of composition (mPa·s)	2500	2600	2100	2200
Evaluation result	Light transmittance (%)	88	88	87	86
	Tensile elastic modulus (Mpa)	60	64	35	41
	Tensile yield strength (Mpa)	5	5	4	3
	Initial tilt angle (degree)	-0.2	-0.2	-0.2	-0.2
	Tilt angle after test (degree)	-0.6	-0.6	-0.5	-0.6
	Protective ability	A whitening was observed on the aluminum reflection film.			
	Delta haze (%)	26	25	32	30

UA3: urethane diacrylate obtained in Synthesis Example 3 of the present specification

TAIC: tris(2-acryloyloxyethyl) isocyanurate

THFA: tetrahydrofurfuryl acrylate

HCPK: 1-hydroxy-cyclohexyl phenyl ketone

Experiments I to IV, wherein urethane acrylate compounds Y-1 and Y-2 indicated in Preparation Examples 1 and 2 of Yukiyasu et al (JP 11279240) were used therein, showed tensile elastic modulus of 64 MPa or less at 25°C as shown in Table A. The tensile elastic modulus were lower than the range (600 to 1300 MPa) in the present invention. Furthermore, Experiments I to IV showed poor results in protective ability.

5. The undersigned petitioner declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent issuing therefrom.

6. Further deponent saith not.

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Signature

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Date